7. (Amended) The method according to claim 1, further comprising the step of:

calibrating said method to a specific layer structure utilizing mathematically specific, theoretical values as well as utilizing experimentally supported data.

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8. (Amended) The method according to claim 1, further comprising the step of:

determining geometrical features given known thermal features of the layer structure.

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Please add the following new claims 9-10.

9. (New) The method according to claim 5:

further comprising the step of providing an additional evaluation based on a regression analysis or a neural network.

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10. (New) The method according to claim1, further comprising the step of:

determining thermal features given known geometrical features of the layer structure.

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REMARKS

The present Amendment revises the specification and claims to conform to United States patent practice, before examination of the present PCT application in the United States National Examination Phase. Pursuant to 37 CFR 1.125 (b),

25 applicants have concurrently submitted a substitute specification, excluding the claims, and provided a marked-up copy. All of the changes are editorial and applicant believes no new matter is added thereby. The amendment, addition, and/or cancellation of claims is not intended to be a surrender of any of the subject matter of those claims.

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PRELIMINARY AMENDMENT A

Early examination on the merits is respectfully requested.

Submitted by,

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Appendix A
Mark Ups for Claim Amendments

This redlined draft, generated by CompareRite (TM) - The Instant Redliner, shows
the differences between -
original document   : Q:\DOCUMENTS\YEAR 2001\P010008-BAUMANN-THERMAL
WAVE MEASURING\ORIGINAL CLAIMS.DOC
and revised document: Q:\DOCUMENTS\YEAR 2001\P010008-BAUMANN-
THERMAL WAVE MEASURING\AMENDED CLAIMS.DOC

CompareRite found   40 change(s) in the text

Deletions appear as Overstrike text surrounded by []
Additions appear as Bold-Underline text

1. [Thermal]**(Amended) A thermal** wave measuring method for contact-free
measurement of geometrical [and/or] **or** thermal features of a layer structure,
[whereby] **comprising the steps of:**

simultaneously driving a modulatable heat source [is driven with]**with at
least two predetermined discrete** different frequencies [and the] **in an
amplituded-modulated manner, thereby periodically heating said** layer structure
[is periodically heated,]**;**

receiving infrared radiation emitted by [the] **said** layer structure [and] **that is**
correspondingly modulated in intensity [is]**; and**

evaluating said received [and is respectively evaluated as]**infrared
radiation as a** function of a drive frequency on the basis of amplitude [and/or phase,
whereby the heat source is simultaneously amplitude-modulated with at least two,
predetermined, discrete frequencies, and the infrared radiation emitted by the layer
structure is] **or phase by** simultaneously [interpreted] **interpreting** corresponding [to
the] drive frequencies.

2. [Method]**(Amended) The method** according to claim 1, wherein [a laser
or, respectively] **said heat source is a laser**, a laser diode, or a light-emitting
diode[(LED) is employed as heat source.]**.**

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[3. Method] **3.** **(Amended) The meth d** according to [one of the preceding claims, wherein the] **claim 1, furth r comprising th st p of:**

adapting discrete frequency parts of [the] **said** drive frequencies [are adapted] to a measurement [problem.] **function.**

[4. Method] **4.** **(Amended) The method** according to claim 1 [or 2, wherein the], **further comprising the step of:**

detecting predetermined frequencies [are detected] with a lock-in evaluation.

5. [Method]**(Amended) The method** according to claim 1, [2 or 3, wherein a fast] **further comprising the step of:**

evaluating individual frequencies using a Fast Fourier [transformation (FFT) is provided for the evaluation of the individual frequencies.] **Transform.**

[6. Method] **6.** **(Amended) The method** according to claim 4 [or 5, wherein a farther-reaching]**:**

further comprising the step of providing an additional evaluation [occurs] **based** on [the basis of] a regression analysis or [with] a neural network.

7. [Method]**(Amended) The method** according to [one of the preceding claims, wherein the method is calibrated] **claim 1, further comprising the step of:**

calibrating said method to a specific layer structure [with calibration both my means of] **utilizing** mathematically specific, theoretical values as well as [by] **utilizing** experimentally supported data.

8. [Method]**(Amended) The method** according to [one of the preceding claims for] **claim 1, further comprising the step of:**

determining geometrical features given known thermal [features or thermal features given known geometrical] features of the layer structure.

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